A DISCUSSION OF RESERVE CAPACITY REQUIREMENTS IN A DE-REGULATED ENVIRONMENT

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RE: Notice of rulemaking 2002-07-01 Establishment of Target Reserve Level for the California Power Authority Investment Plan
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INTRODUCTION:

The CPA has been tasked with the requirement to "achieve an adequate energy reserve capacity in California within five years of the effective date of this division" "At the time of the publication of the CPA's initial Energy Resource Investment Plan in February 2002, a target of 15% reserves was used. This was derived from historical practices and is consistent with historic reliability targets."

The CPA is now asking for comments on the 15% reserve requirement in light of the recent energy crisis and the alteration in the energy market from regulated to de-regulated.

Interested parties have been asked to comment on the amount of reserves required to provide a reliable and competitive marketplace in California.

QUESTIONS AND COMMENTS:

1. Considering the Fundamental difference between the current generation market and the past, does the historic reserve level reflect the greater reliability risks of the present and future?

   Answer: A de-regulated market depends on the availability of excess capacity being available at any given moment to maintain stability. This function is similar to the function provided by large market makers in the stock market that step into the trading business when their stocks move rapidly. In this instance the function is to provide both price stability and supply availability.

   The question remains is 15% great enough to accomplish that goal. In a regulated market with advanced planning and forward looking it is possible to construct units before they are actually required. In a de-regulated market construction is dependant on market price signals to foster or stifle construction. I would tend to believe that this price driven stimuli will have some amount of lag time between

needs and satisfaction of those needs. This would tend to indicate that a 15% reserve would be inadequate.

2. Given the recent cancellations and delays, and the uncertainty of the financial community, how many of the proposed plants will actually come on line, and under what terms and conditions?

   Answer: The current price signals for base load generation do not support new construction. Plants that are currently in planning should be delayed by either the constructors or the banks that are supporting the constructors. Plants that have moved forward and have significant investment already made will be forced to completion with the equity investors taking the bulk of the market risks. In California the changing market environment tends to discourage investment therefore increasing the likelihood of power shortages.

3. What will the lingering effects of behavioral conservation be, and what are the permanent effects?

   Answer: The short-term behavioral effects of increased conservation will erode fairly rapidly if the prices are stabilized. These effects will re-emerge again if there is a significant price increase and then fade away over time.

   The long-term behavioral effects will be product and service related. As examples, people will be willing to pay higher capital prices for more energy efficient appliances. Builders will market more energy efficient homes. Consumers will have less available disposable income and will alter their other purchase habits.

   Over the very long-term people and the marketplace will adjust to the new reality and the system will continue. If that means a larger percentage of their disposable income shifts to the utility sector then that will be the outcome.

4. What impact will the significant rate increases have on load and consumption patterns?

   Answer: The demand for electricity will continue to increase based on the fundamental fact that more and more of our activities and daily options are being converted to an electrical base.

   People will continue to enhance their appliances along with other consumer electronics. People will move more and more electrical devices into their homes. At the same time, producers will attempt to reduce the electrical use for these devices as the price of electricity increases.

   The consumption patterns will be altered to some degree by new product offerings. Items such as smart thermostats and equipment controls will alter use

patterns. Special rate structures by electricity suppliers will encourage alterations in use patterns. Overall people will make attempts to optimize their electricity use by adding automatic systems. These systems will have permanent impacts on consumption patterns while depending on individual habits will have only temporary impacts on usage patterns.

5. What impact will the new market design elements approved by FERC on 7/17/02 and those still pending have on system loads and procurement practices?

   Answer: No opinion on this at this time.

DISCUSSION:

If the CPA is going to provide peaking capacity to meet reserve requirements they may be preventing private development of peaking capacity. It is clear that any capacity that the CPA installs will be in direct competition with other producers. Since this capacity will be provided for in the rate base, these units will be dispatched based on incremental production costs. In effect this will place a ceiling on short term rates in California.

Private developers will be able to recognize this ceiling and make investment decisions based on this price. Generally this will mean that short term needs will be satisfied by existing peaking capacity and CPA owned reserve capacity. I am not sure this is the intent of the reserve program.

To combat this occurrence the IOUs may be instructed to issue RFPs from time to time to add to the peaking capacity so that the reserve capacity in fact serves that need.

At this time it would appear that new construction in California is going to be extremely limited. The perceived risks on the developers is high enough to inhibit their decision making. Therefore, the installation of peaking systems by the CPA may be critical in averting a repeat of the pricing that occurred in 2000.

If the CPA stays with a combination of peaking and renewable projects they will be protected and the market pricing functions will be protected. I can't determine if 15% is high enough margin. It may not be sufficient for an de-regulated market but we can all be assured that less than 15% reserve will not function to provide price or supply stability.